

## Ethical Scientific Conduct (Spring 2020)

- SGS Course No. 16:115:556
  - [Registration form](#) for those who are not graduate students
- (Please complete and return this form to Tina Marottoli in the SGS office – New Brunswick/Piscataway, 675 Hoes Lane R-102 Piscataway, NJ 08854-5635 PH: 732-235-2106)

This course discusses the definitions and ethical problems caused by fabrication of data, falsification of results, plagiarism, and other behaviors inconsistent with ethical scientific conduct.

**Participants:** This course is required for all SGS Biomedical PhD students and Masters of Science in Biomedical Sciences students. The course complies with NIH guidelines for RCR training. Students will receive 1 credit for successfully completing the course. Postdoctoral fellows as well as F33 and K award recipients are invited to participate in the course and will receive a certificate of completion after attendance at a minimum of eleven one-hour weekly meetings. Students in their 5<sup>th</sup> year graduate school must take a refresher training course (16:115:558).

### Course Objectives:

1. To describe the relationship and responsibilities in the compact between mentor and mentee
2. To identify cases of plagiarism and copyright infringement
3. To explain proper methods for data acquisition and laboratory book maintenance
4. To describe policies for handling research misconduct
5. To explain how authorship should be decided and how publications should be prepared
6. To describe situations of professional or financial conflict of interest and how to handle them
7. To identify cases of inappropriate behavior between individuals and how to act as responsible member of society
8. To explain the relationship between academia and industry
9. To explain appropriate methods for peer review of manuscripts and grant proposals
10. To describe policies for the use of animals in research
11. To describe policies for including human subjects in studies
12. To describe some of the environmental and societal impacts of scientific research
13. To identify cases that involve intellectual property and technology transfer and the approach for dealing with these situations

**Course Format and Location:** The course meets Mondays from 4:00-5:00pm starting January 27, 2020. The format of the course will generally consist of lecture by a content expert from 4:00-4:25pm in the East Lecture Hall on Busch Campus followed by small group case discussions from 4:30-5:00pm held in rooms N1-N5 on the second floor of the Kessler Teaching Wing of Robert Wood Johnson Medical School (one floor above the

East Lecture Hall). Students are expected to attend both the lecture and the small group discussion for each topic. There are a couple of weeks in which the lecture will take the whole time and there will be no small groups. A detailed syllabus is provided on this Sakai site.

**Small Group Assignments:** The small rooms locations are listed below. The faculty facilitating the small group discussions will vary from week to week. The detailed list of student and faculty assignments can be found in a separate attachment on this Sakai site.

- Group 1 (Room N1)
- Group 2 (Room N2)
- Group 3 (Room N3)
- Group 4 (Room N4)
- Group 5 (Room N5)

**Course Materials:** Each lecturer will post his/her slides and cases prior to the lecture. These can be found on the Canvas site under “Files”. **You are responsible for accessing the assigned case and other material before each lecture and reviewing it, so you are ready to discuss it in class.**

Some of the cases for the course come from:

Korenman, SG and Shipp, AC, Eds. Teaching Responsible Conduct of Research Through A Case Study Approach: A Handbook for Instructors. Washington, DC: Association of American Medical Colleges, 1994.

National Academy of Sciences, National Academy of Engineering, Institute of Medicine On Being a Scientist: A Guide to Responsible Conduct in Research, Third Edition. Washington, DC: The National Academy Press, 2009.

Macrina, FL Scientific Integrity, 3<sup>rd</sup> Edition. Washington, DC: ASM Press, 2005.

Students are not expected to obtain these books.

Another resource is “The Lab, Avoiding Research Misconduct” prepared by the Office of Research Integrity of the Department of Health and Human Services which is an interactive movie that allows the viewer to chose the outcome of the film based on ethical decisions facing the four characters. The movie can be accessed online at <http://ori.hhs.gov/The Lab>.

Webinars on Scientific Rigor and Reproducibility are found here  
<http://neuronline.sfn.org/tmedr>  
<https://www.nih.gov/research-training/rigor-reproducibility/training#Modules>

**Grading Policy and Weekly Assignments:** This course is graded P/F, with attendance as well as weekly written assignments required.

Students must be present and signed in to be graded as present. Students are expected to be present for the entire class period for each session attended. It is expected that students will prepare for each session by reading the case studies in advance and actively participate in discussions.

Weekly written assignments will be posted on Canvas the day of the lecture (Monday) and will be due by 4pm on the following Monday. The assignment will consist of an open-ended question related to the topic that week and requires a one-paragraph response. There will be several choices to select among for the written assignment but only ONE response is required per week. Students are required to complete a minimum of 11 of the 13 weekly assignments. The assignments are required but not assigned a letter grade. Written assignments should be uploaded to Canvas from a Word document. Students agree that by taking this course all required papers may be subject to submission for textual similarity review to [Turnitin.com](https://turnitin.com) via Canvas for the detection of plagiarism. All submitted papers will be included as source documents in the [Turnitin.com](https://turnitin.com) reference database solely for the purpose of detecting plagiarism of such papers. Use of the [Turnitin.com](https://turnitin.com) service is subject to the Usage Policy posted on the [Turnitin.com](https://turnitin.com) site. Students who do not agree should contact the course instructor immediately.

Those missing 3 or more sessions and/or 3 or more written assignments will receive a grade of Incomplete (“IN”). Note that there is no such thing as an excused absence. Incomplete grades must be remediated. Failure to remediate results in grades of IN be changed to F.

**Attendance:** Attendance (required to pass the course) will be taken at the small groups, except for those sessions which are only held in the East Lecture Hall. After each session, each student attending must sign the class roster to document attendance. Please check the roster to make sure that your correct name and affiliation are recorded; if any errors are present or your name is missing, please clearly print your information in addition to signing the roster.

Note: This is a course on Ethical Scientific Conduct. Any student signing for another or otherwise misrepresenting facts on the attendance sheet will be subject to disciplinary action, which can include dismissal from the university. We look forward to your active participation.

**Students with Disabilities:** Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation: <https://ods.rutgers.edu/students/documentation-guidelines>. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the Registration form on the ODS web site at: <https://ods.rutgers.edu/students/registration-form>.

**Academic Integrity:** All students are responsible for locating, reading, and abiding by the University Policy on Academic Integrity for Graduate Students. The policy is available on-line at <http://academicintegrity.rutgers.edu/academic-integrity-policy/> and is

outlined in the SGS handbook

[http://rwjms.rutgers.edu/education/gsbs/current/student\\_handbook.html](http://rwjms.rutgers.edu/education/gsbs/current/student_handbook.html)

**Course Director:**

Janet Alder, Ph.D.

RWJMS Research Building/SPH 357A

[janet.alder@rutgers.edu](mailto:janet.alder@rutgers.edu)

732-235-5392

Dr. Alder is available throughout the week. Please call or email to make an appointment.

**Course Faculty:** The large group lecture is conducted by an expert in the field who is affiliated with Rutgers University. The small groups are facilitated by Rutgers faculty actively conducting research who represent each of the joint graduate programs.

**Course schedule for Spring 2020:**

4:00-4:25pm East Lecture Hall

4:30- 5:00pm N1-N5

- January 27 Mentor-Mentee Responsibilities and Relationships (Dr. Janet Alder, [janet.alder@rutgers.edu](mailto:janet.alder@rutgers.edu)) and Why Study Scientific Ethics (Troy Shinbrot, [shinbrot@soe.rutgers.edu](mailto:shinbrot@soe.rutgers.edu)). **Case discussion as full class. No small groups.**
- February 3 Data Acquisition and Laboratory Tools: Management, Sharing and Ownership (Dr. Scott Kachlany, [kachlasc@sdm.rutgers.edu](mailto:kachlasc@sdm.rutgers.edu))
- February 10 Research Misconduct and Policies for Handling Misconduct (Dr. Celine Gelinas, [gelinace@rwjms.rutgers.edu](mailto:gelinace@rwjms.rutgers.edu))
- February 17 Plagiarism, Academic Rules, Copyright (Yingting Zhang, [yzhang@ca.rutgers.edu](mailto:yzhang@ca.rutgers.edu))
- February 24 Responsible Authorship and Publication (Dr. Gary Aston-Jones ([gsa35@ca.rutgers.edu](mailto:gsa35@ca.rutgers.edu)))
- March 2 Peer Review (Dr. Carol Lutz, [lutzcs@njms.rutgers.edu](mailto:lutzcs@njms.rutgers.edu))
- March 9 Conflict of Interest – Personal, Professional, and Financial (Dr. Judy Neubauer, [neubauer@rwjms.rutgers.edu](mailto:neubauer@rwjms.rutgers.edu))
- March 16 Spring Break – No class
- March 23 Scientist as Responsible Member of Society (Amy Guerin, [arg127@hr.rutgers.edu](mailto:arg127@hr.rutgers.edu))

- March 30 Collaborative Research in Academia and Industry (Vince Smeraglia  
[vincent.smeraglia@rutgers.edu](mailto:vincent.smeraglia@rutgers.edu))
- April 6 Contemporary Ethical Issues in Biomedical Research (Anthony Gresko,  
[anthony.gresko@rutgers.edu](mailto:anthony.gresko@rutgers.edu))
- April 13 No class
- April 20 Environmental and Society Impacts of Scientific Research (Jessica  
McCormick-Ell, [jessica.mccormickell@rutgers.edu](mailto:jessica.mccormickell@rutgers.edu))
- April 27 Policies for Human Subjects in Research (Dr. Paula Bistak,  
[bistakpa@ca.rutgers.edu](mailto:bistakpa@ca.rutgers.edu))
- May 4 Policies for Animal Subjects in Research (Dr. David Crockett,  
[crockett@rwjms.rutgers.edu](mailto:crockett@rwjms.rutgers.edu))